

SCTh1 Basic Limitations to the Signal to Noise Ratio in Fiber Systems

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The need for long-haul transmission of analog and digital data in an increasing number of applications is focusing attention on a number of fundamental noise mechanisms which limit the performance of even ideal systems. The talk will consider the basic physics as well as the system implications of a number of these cases including self heterodyning noise in optical amplifier systems and conversion of phase to intensity fluctuations in fibers.